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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,749	09/22/2006	Zhouxin Zhang	CNIP-F-PCT-US	3020

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EXAMINER

FRIEDHOFER, MICHAEL A

ART UNIT	PAPER NUMBER
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2832

MAIL DATE	DELIVERY MODE
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04/01/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,749	Applicant(s) ZHANG, ZHOUXIN	
	Examiner Michael A. Friedhofer	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/22/06 & 3/19/07</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Field et al in view of Buttner et al.

Field et al teaches a contact-type sensor of an object including a membrane switch with foam located under the membrane switch.

Field et al does not disclose the sponge being located on top of the membrane switch.

Buttner et al teaches a contact-type sensor of an object comprising a rubber foam 2; and at least one jiggle switch 8 arranged thereunder, the jiggle switch is selected from the group consisting of membrane jiggle switches, mechanical jiggle switches, conductive plastic jiggle switches and capacitor jiggle switches.

The output film is integral with the object by being fixedly attached thereto.

It would have been obvious to one of ordinary skill in the art to apply the teachings of Buttner et al to Field et al to mount the membrane switch on the frame with the sponge being located thereon because this is for the same

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purpose of providing shock absorption during operation of the machine reducing contact chatter and misoperation.

3. Claims 2, 3, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Field et al in view of Buttner et al as applied to claim 1 above, and further in view of Burgess ('617).

Field et al as modified by Buttner et al disclose all of the claimed limitations with the exception of the specific structure of the membrane switch.

Burgess teaches a membrane switch for a contact-type sensor of an object including an input film 110; an insulating film 130; and an output film 150.

Through holes are arranged in the insulating film which is arranged between the input film and the output film. A conductive film 120 on the input film and a conductive film 140 on the output film each face the insulating film. The input and output films are metal films.

It would have been obvious to one of ordinary skill in the art to apply the teachings of Burgess to Field et al as modified by Buttner et al to form the membrane switch with the structure of Burgess because the purpose of the switch would not be altered by the structure utilized so long as the switch is still activated by coming into contact with an object in which the Burgess structure provides a minimum of structure required to perform the desired operation.

4. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Field et al as modified by Buttner and Burgess ('617) as applied to claims 1-3 and 9 above, and further in view of Stanley.

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Field et al as modified by Buttner and Burgess teaches all of the claimed limitations with the exception of contacts arranged on the input film and/or output film and located at the through holes nor that the contacts on the output film are spaced apart, separate, exposed printed circuit contacts.

Stanley teaches a contact-type sensor having an input film and output film separated by a spacer in which either a conductive film or contacts are located on the input film and two spaced apart, separate, exposed circuit contacts located on the upper side of the output film corresponding to the through holes.

It would have been obvious to one of ordinary skill in the art to apply the teachings of Stanley to Field et al as modified by Buttner and Burgess to form contacts on the output film and/or input film in which the contacts on the output film are formed by two spaced apart, separate exposed printed circuit contacts because this is for the purpose of being able to differentiate the location of contact on the sensor.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Field et al as modified by Buttner et al and Burgess ('617) as applied to claim 1-3 and 9 above, and further in view of Miller.

Field et al as modified by Buttner et al and Burgess teaches all of the claimed limitations with the exception of either the input film or the output film being integral with the sponge.

Miller teaches in the figures a contact-type sensor including foam input and output layers upon which the conductive films are directly attached.

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It would have been obvious to one of ordinary skill in the art to apply the teachings of Miller as modified by Field et al as modified by Buttner et al and Burgess to form the conductive film directly on the sponge to form a conductive sponge because this is for the purpose of reducing the number of parts required to form the sensor while still providing proper operation.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Josephs, Battle, Filion et al, Boon et al, Burgess ('130), Sprecher et al, and Patterson et al teach various contact-type sensors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Friedhofer whose telephone number is 571-272-1992. The examiner can normally be reached on Mon-Fri 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael A. Friedhofer
Primary Examiner
Art Unit 2832

/Michael A. Friedhofer/
Primary Examiner, Art Unit 2832